

The Historical Significance of Khejuri-Hijli Sector of the Hugli Estuary and its Sequential Deterioration: A Management Proposal for Revival

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By

Sri Mihir Kumar Pradhan

Department of Geography and Environment Management

Vidyasagar University

Paschim Medinipur, West Bengal

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1.1 INTRODUCTION

Khejuri Police Station is located in the south eastern part of the district of Purba Medinipur of West Bengal, on the western bank of the Hugli River, lying between 21^o 47' 42" N - 22^o 4' N and 87^o45' 4" E – 88^o 18" E covering an area of 267.97 Sq. Km. Following Administrative units, physical boundary & other statistics of the region is given below

<i>Block</i>	<i>Area (Km²)</i>	<i>% of Area to total district area</i>	<i>Physical boundary</i>
Khejuri-I	130.51	3.04	Talpati channel in the North. Rasulpur in the South. Khejuri – II in East. Thakurnagar Khal & Bhagwanpur-II Block in West.
Khejuri–II	137.46	3.20	Talpati channel in the North. Hugli river in the East. Rasulpur in the South-West. Khejuri – I in the West.

At the confluence of the river Bhagirathi-Hugli and the Bay of Bengal, Hijili Island emerged from the estuarine surroundings approximately within 1400-1500 A.D. Later the island was covered with natural mangroves. Gradually it became the abode of fishermen. Through many geomorphological, social, economic, political and historical phases it had come to the present state. Characteristically, Khejuri-Hijli is formed with ordinary alluvium of the Gangetic delta. The area is inclined to the South East direction with gentle undulating surface created by the waving rolls of the Bay of Bengal. In the early age of the formation of this tract it rose slightly above sea level and was intercepted by a number of tidal creeks. This area was then occupied by some tribal communities of fishermen, boatmen and sailors. Since long past it had a great locational importance because it was situated between the great historical port Kolkata and Piplipattanam (A port near Subarnarekha river mouth). At the time of emergence of this land, it was intersected by Cowcolly River, a tidal creek, and the two islands namely Khejuri and Hijili were formed. After the decaying of Cowcolly River the said islands were merged and the total area is called Khejuri.

Because of its strategic location at the mouth of the Bay of Bengal and the facility of navigability, Khejuri- Hijili attracted the foreign traders like the Dutch, the Portuguese, and the English. Among them the Portuguese came first to our country for trading. Then came other European traders. Lastly the English came. They settled in different places all over the country, particularly in the coastal regions, and also penetrated into the interiors of Bengal like in Murshidabad, Hoogly etc. These foreign traders got involved in wars over the acquisition of business-centers. Such was the history of Khejuri-Hijili also. At first the Portuguese hailed here in 1514, and aquired command over the land for more than a century. They introduced the cultivation of cashew nut, popularly known as Hijli-

Badam (Hijli-nut), and other fruits like *Sapotee*, *Star fruit*, *Lemon* etc. The main articles of the Portuguese trade include spices, sea fish, meat, salt etc. from this section regularly.

Later these islands were occupied by the British. In the mean time, the Portuguese, being driven out of this place adopted piracy as their strategy. The Portuguese pirates were locally known as *Mohg* (Bose, 1921). Their cruel attack on local people for extracting money, ornaments etc. almost depopulated these islands. Naturally these islands became forest infested and abode of wild animals. The British traders were driven out of Hoogly by the Mughal emperor. So they took shelter in Hijili in 1663. Later they introduced a full-fledged port, rather a halting station from where ships from Ceylon (Srilanka), Malakka, Batavia (Jakarta) etc. would start entering for trade and commerc. Thus resourceful Khejuri began to thrive. The British Trading company deployed soldiers at Khejuri to oppose the Portuguese pirates. In 1772, the company established a post office here for correspondence and information. It is known to be the first post office of India. Huge quantity of salt had been manufactured here. It amounted to 1/3 of the total volume of consumption in India. So in 1781, a salt agent was first appointed in Hijili-Kanthi. But all the good days almost came to an end due to the devastating storms and floods in 1807, 1831, 1833 etc and lastly in 1864.

Because of its coastal location, frequent tidal spills causing logging of saline water in this area, harmed crops production for years, and made the area prone to malaria. These are the main causes of deterioration of this area.

OBJECTIVES OF THE STUDY:

The study area predominantly suffers variably from coastal hazards like bank erosion, salinity, estuarine and riverine floods, storm surges etc. due to its dynamic estuarine location. Once, this area had gained the port centric activities due to its favorable estuarine location of the Hugli River. But now these are lost basically for thalweg shifting of Hugli River from close to the study area to far (towards east). On the other hand to revive the past activities the basic need of the over-increasing population, local resources have increased rapidly without paying any regard to environmental balance. Naturally some objectives are also considered in my study. Those are as follows

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- To assess the causes of decay of rivers and canals of the area under study.
- To enumerate the historical hazardous events responsible for the sequential deterioration of the port-centric activities.
- To examine the changing nature of occupation in relation to changing resource base and commercial demands.
- To explore the opportunities of local resources available from both land and water.
- To search strategies for the economic revival of the study area in the context of present econo-environmental setting.

METHODOLOGY

Studying different types of available documents, maps from various level, Govt. records & documents and authentic books, surveying the present condition in the concerned area on the basis of theoretical knowledge and maintaining a co-relation between the theoretical knowledge and practical observations has been done in post field method.

Geomorphological history of the area has been tried to reconstruct on the basis of different morphologic evidences supported by other information. Observation of channel adjustment to the events like extreme floods, short term fluctuations in discharge and sediment supply etc. have enabled to assess the impacts of such events in historical context. Analysis of the sediment load data, tide gauge records etc have significantly helped for this purpose. Historical records including documents, survey notes, maps, photographs etc. have provided valuable information about the geomorphological changes. Palaeo-channels are preserved as abandoned surface forms in the exposed sections. Such channels have been studied in detail to explore the geomorphological history of the area. Sediments of the layers of successive stages of formation have been investigated to interpret the palaeo-flow hydraulics. The slack water depository beds have also been scanned to arrange the sequence of geomorphological evolution of the area. Remains of early structure, monuments, and office buildings have been vigilantly observed and written reports, research articles etc. have been carefully studied for sequencing the socio-economic history of the area.

Later on accuracy assessment was performed by comparing two sources of information: classification of map derived from old records and maps and the ground truth information. The output obtained by performing the above steps includes land use and other maps and charts. These outputs were then analyzed to detect the historical significance of Khejuri –Hijili sector of the Hugli estuary and its sequential deterioration. These changes in the study area that were identified from classified maps, charts and diagram were tabulated and finally results were concluded as the management proposal for revival.

TEMPORAL SCALE OF THE STUDY:

The present study area was once a part of ‘Hijili state’ in 17th century and its capital was Hijili which at present lies in this area under study. Later in 1836 the district of Hijili was connected with the district of Midnapore. Some important and historical places were under this district. Afterward Midnapore, the largest district of West Bengal was divided into Paschim Medinipur and Purba Medinipur for its administrative need. But the study area has some important history, culture and chronology. So, various data from its period of emergence since 1400 A.D to present time are also studied for its historical land marks which play an important role to its history, trade link, economy and rule of various rulers. The port- centric activities of this area are studied since 1679 to its death point, 1864. The position of the navigation route related to the Khejuri port is analyzed from 1768 to 1912. Though, the administrative boundary of the study area has

been changing from time to time (Appendix no - v and vi) due to bank erosion by the river Hugli and river Rasulpur, some new habitat areas in early 20th century have also grown up. Total population data are collected and analyzed from 1872 to present time as available. The port- centric activities data are studied since its growth from some foreigners' diary. After the cyclone of 1864, the sequential deterioration phase of the Khejuri port has started. All the possibilities from this period to present time behind its revitalization of economic and physical aspects are also analyzed critically.

CHAPTER – 2: Contemporary Physical Environment

The area under study is located at the western side of the river Hugli estuary. The northern part is almost rectangular in shape where as the southern part is triangular and it is nicely encircled by the rivers and canals. The area is formed under deltaic flood-plain environment of Hugli estuary. Later it is modified by marine and riverine processes. As it lies between 2-3 mts. above the mean sea level, it is considered as coastal low land in physiographic character. Naturally, water-logging is a common phenomenon particularly in southern part of the area. Khejuri is largely exposed to cyclones that frequently lash out at the estuary during summer. Due to accumulation of huge newly deposited sediments and being an alluvial tract of the Gangetic plain, it is highly suitable for agricultural practices.

Physiographic setting

Khejuri police station is located at the east central part of the Purba Medinipur district, along the right bank of the Hugli estuary. It is administratively divided into two blocks, Khejuri I and Khejuri II.

During early fifteenth century, Hijili remained as a state territory in Orissa (Now Odisha) province lying to the east of the river Subarnarekha and bounded by the river Kaliaghai in the north and river Hugli and the Bay of Bengal to the south (Map No 2.1). Kasba-Hijili of the then Hijili Island was the capital of the said state ruled by a king (Karan, 1926).

This place attracted many European traders as an attractive harbour and later as a centre of trade and commerce as well as a colony. The place was situated near earlier ports and international centers of trade like *Piply* (on to right side of the river Subarnarekha mouth, in Odisha and was important during 17th century), *Saptagram* (near the confluence of River Bhagirathi and Saraswati, West Bengal, which was important during the 13th century and famous in the 13th century), *Tamlook* of 13th century (at the confluence of river Rupnarayan and Hugli), *Balasore* (near the mouth of Budhabalanga, in Odisha famous in the 17th century etc.).

Being situated at the mouth of the Hugli River, Khejuri enjoyed locational advantages, for trade and commerce which consequently helped it to emerge as a port and trade centre .

The area under consideration has differently been named and called by the foreign and native people at different times. In most cases such names owe their origin to the natural resources which were available locally.

CHAPTER – 3: Historical growth and prosperity of Khejuri-Hijili sector

Just after the abolition of '*Tampralipita Bandar*' (a sea-port of north-east India near the confluence of the river Rupnarayan, the river Hugli and the Bay of Bengal which existed till 11th century), Khejuri turned into a full-fledged sea port. Voyagers used to come to Khejuri by boat or sloop and from here they would sail for any foreign port. To run the activities of the said port, a post office was built in 1772 (the earliest post office in British India), a light house named as Cowcolly light house (the first light house under the jurisdiction of the Calcutta Port Commissioner) in 1810 was constructed.

Upto the 18th century it was the capital of Hijili State. During that period a mosque which was built by the Afghan rulers in 1661 still exists. The European traders built a *Neel-Kuthi* or Indigo house (a building meant for indigo business) a grave yard, a semaphore station and an Irrigation bungalow for the purpose of their habitation as well as trade and commerce.

Historical importance of Khejuri Hijili

In the earliest period of its history, till 1568, Hijli, covering an area of about 1,098 square miles, was an appendage to Maljhita-mahal of Odisha. Nominally tributary to Odisha, the semi-independent kings of the Das dynasty ruled over the Hijli khanda from Bahiri, a busy trade centre near the sea at that time. Later Hijli yielded to Afghan invasion, then the political dominance over Hijli-Khanda was bound to change hands. During this period, a Pathan Youth, with the help of the local people, trained by him, established a state with Hijli as its capital. The Pathan youth gradually gathered strength, assumed the name 'Ikhtiar Khan' and, with the help of a neighboring landlord, conquered the whole of the old Hijlikhand (Bose, 1921)

From the 15th century the emergence of Hijili Island from the sea bed near the confluence of the Bhagirathi- Hugli River was noticed by many foreigners for its natural resources. Most of the areas of Medinipur were under Hijili. *Ikhtier Khan* established his kingdom Hijili province at Kasba-Hijili in the island of Hijili. Among many kings in Hijili, *Tajkhan Masnad-E-Ala* earned reputation for his popular deeds (Map no-3.1) Near river Hugli and Rasulpur confluence his remarkable and memorable mosque still exists, (Plate no 3.1) which was constructed in 1648. From the 17th century, the long pillars of the mosque had been the landmark for the sailors to locate the Hugli mouth and Hijili port (Reaks, 1908). The family tree of the rulers and the kings of Hijili are as under (Table no. 3.1).

CHAPTER- 4: Changing behaviour of the estuarine environment

Change, rise and fall, are nothing but natural. This is true in case of Khejuri also. In the past, to speak of historical or geographical facts, stability was at a premium. Constancy was never a usual feature of a territory, a kingdom or a state, especially if its land was fertile, it had a strategic importance from the military point of view or it had commercial prospects. Land, surface or contours too often changed, especially as it was the coastal area. But now its stability is fairly usual

Sometime in the 16th century the island of Hijili appeared above the sea level, near river Rasulpur and Bhagirathi confluence in Hugli River estuary being, nourished by the river-borne silt. Another island Khejuri, which made its appearance to the north-east of Hijili, about the same time and was separated from Hijili Island by the Kaukhali River. The two islands remained separated till the close of the century. Later this river filled up to join them in a mainland. A narrow stream named *Kunjapur Khal*, running between Hijli and Khejuri still bears the faint memory of once a navigable river known as '*Rogue river*'. - "In the Hugli River there were, however, a few Portuguese pirates about twelve miles above the Saugor island whence the rivers or one of its branches at that part of its course was known as the *Rogue's River*" (Hamilton, 1739).

On the southern bank of the river Rupnarayan, there was a port at Tamluk mentioned as '*Tamalites*' in *Ptolemy's Geography*. It was an important sea port in ancient times. But it lost its importance towards the end of 10th century due to lack of sufficient naval depth due to gradual silting. Hijili then rose to prominence (Chakravarti, 1905).

Characteristically Khejuri-Hijli is formed of ordinary alluvium of the Gangetic delta. In very few places there are gentle undulating surfaces, the waving rolls of which were slightly elevated above the alluvial plain. In the early stage of formation, this tract was slightly elevated above sea level and was intercepted by numerous streams. This area was then occupied by some tribes or communities of fishermen, boatmen and sailors.

"In the maps of the Portuguese historian *De Barros* (1553) and *Blave* (1660) sand banks are shown on the coast of Hooghly mouth at khejri (kedgree) indicating the formation of an island. In *Valentyn's* map and *Bowrey's* chart two islands are shown distinctly one above the other, the upper one being the island of khejri and lower one the island of Hijili." Later O'Malley also mentioned about the land that "It is interesting to note here the more important physical changes which took place in this locality during the 18th century. Valentijn's map (circa 1670), Bowrey's chart (1688), and the Pilot chart's of 1703 and other charts in different times, all show two islands in a bay, with a river running inland (Map no-4.2 - 4.7). Gradually the bay filled up, and the stream separating the two islands also became silted up. In this way both the islands were joined to the main land, and with each other, and it is clear that this change had taken place by *Rennell's* time by 1767 (O'Malley, 1995).

CHAPTER-5: Sequential Deterioration Processes

Khejuri, as sited on the Coastal plain of West Bengal at the Northern Bay of Bengal, has been facing diverse environmental hazards like cyclones, storm-surges, salinity, erosion water logging etc. from its period of emergence (16th century). In this area mainly marine hazards are regular and its associated events are common due to its locational advantages. In mid 17th century to early 18th century some tropical diseases like malaria, Cholera, small pox and dysentery etc. broke out in epidemic form causing huge death toll which also played a vital role in deterioration of the area. From 16th century A.D. Khejuri turned in to a port when navigation route had been maintained touching the area. But the shifting of the Navigation route towards east (about 8 K.m. within 1768-1918 A.D.) due to continued silt deposition and tectonic position of the Bengal basin caused of deterioration of the port.

Siltation problem and deterioration of navigation

The study area is drained by many rivers, channels, and canals to form a network. The Rasulpur River, the last tributary of the river Hugli runs along the Southern and South-Western margin of the area. Its feeder canal *Talpati* lies to the North, the river Hugli to the East and Thakurnagar Khal (canal) to the West of the area. Another Khal like *Palabani*, *Arabaga*, *Birbandar*, *Haludbari khal* are other channels which join the Rasulpur River and Talpati canal. Old historic *Hijli Tidal Canal* (H.T.C.) runs along the Western part of this area (see Map No. 5.2). This channel has a great importance for transport, fishing and also for drainage. The H.T.C. was dug in 1868 and opened for public on 1st September in 1873. Initially it was 2.4 meter deep (O'Malley 1995) but now it has lost its depth due to siltation, agriculture on canal bed and some anthropogenic activities such as fishing and deforestation etc. A special committee was appointed in 1889 to enquire into the drainage system of the area under the command of the Hijili tidal canal and other flooded tracts including the Rasulpur and Haldi river basin.

CHAPTER-6: Management proposal for revival

Khejuri is both naturally and economically resourceful. Once, these resources have been utilized to a great extent. As such, the area had excelled economically and its prosperity attained a great height which sustained for a long. But later the physical and political processes have tarnished its economic importance. Now it is necessary to revive its early opulence. The following paragraph assesses the potentialities of the area and possibilities of mobilizing the local resources for economic development of this region.

Assessment of future Potentialities

Khejuri lies in-between the remarkable port of Kolkata and Mega coastal tourist place Digha. The Ganga has helped to develop more than 50 towns and cities like Kolkata on either side of her banks. The lower part of the river Ganga is known as Bhagirathi-

Hugli. The ancient city, Kolkata is situated upward 128 km. away from Hugli river mouth. The Haldia port (22.03°N and 88.06°E), lying just 38 km. up from the mouth of the river Hugli was established as a complementary of Kolkata port (22° 32' 53" N and 88° 18' 5" E) in 1959. Khejuri is actually located just near the mouth of the said river. Due to the advantages of such a geographical location it has the potentialities to restore its past glory and simultaneously to become an ideal place for tourism. The place, which was once frequented by the Portuguese, the Dutches, the English and the Mughols more than 500 years ago, can now recover its previous importance if it being reviewed by proper authority. It is sure that the slightest administrative care from the department of tourism will focus the Khejuri in the limelight, and thus its lost heritage may be restored. Neighbouring tourist places around the study area are Sagardwip, Digha, Junput, Dariapur, Petuaghat (A Fishing Harbour), Mandarmoni, Tamluk (Tamralipta) Geonkhali, Nayachar, Haldia, etc. So its great potentialities in different spheres cannot be ignored. These are:

CHAPTER-7: Major findings

The study area, being located in the deltaic fringe of the Lower Bengal Plain under the control of estuarine process, is geomorphologically dynamic in character where accretion and erosion have taken place in dominance rhythmically in different phases of its evolution. At present the above processes are still operative to continue morphological changes in different parts of the area, which need immediate measures for their control. Accordingly, strategies have been formulated; planning proposals have been implemented through both Govt. and non-govt. initiatives. In spite of all these following problems of the area others can be identified some of which are inherent to the area itself and some are caused by human interference in the natural systems.

- The area under study is a recent alluvial coastal tract undergoing both estuarine and aeolian activities. It is often inundated by storm surges; high tide and flood due to heavy monsoonal rainfall even for short duration mainly in Eastern and South-western part. Sometimes in the rainy season and during high tide, excess water of the river Rasulpur spill over the southwestern part of this area due to breakage of earthen embankment along the said river. Again saline water-logging for 2-3 weeks also hampers aman crops of this area. As this coastal area is situated at an average height of 2 mt above mean sea level so water logging is a common factor during monsoonal rain, cyclone and high tidal time.
- Land and forest are getting degraded in this area through some human interferences like-
- Most of the earthen embankments made earlier to protect the agricultural lands from saline water are now weak for lack of maintenance. Now those are also reduced both in height and breadth for the construction of metal roads and reclamation of agricultural field by local people. So the spilling of the saline water has become easier.

- The low-lying areas with intersection of numerous tidal creeks are now modified with rapid aggradations of tidal sediments and successively became part of the mainland. Therefore distribution of hydro-energy during storm events gets restricted, that increases probability of embankment breaching and consequent inundation of vast area. The erosive activity at the shoreline is probably episodic in nature being associated with extreme events like High magnitude Cyclones, Tidal Waves and seismic activities.
- The government has no specific land use policy. As a result now-a-days agricultural lands are being converted into aqua cultural ponds for prawn culture. Near the coast mangrove swamps are being destroyed to derive residential and arable land that hampers the eco-system largely.
- Moreover, some tropical diseases like malaria, blood dysentery, small pox and cholera took a great toll of lives in this area. Cholera took an epidemic form in 1901, 1902, 1906 and 1907 here. As a result, the lack of population in the area hampered the socio-economic growth of the said area repeatedly.

Above all the western part of this sector had been getting aggraded in comparison with its eastern part due to its physio-tectonic character of the area. So thalweg has gradually shifted towards the east. It was noticed that thalweg has shifted 0.22 Km. per year on an average from 1768 to 1912. It was also responsible for decline of the port.

In spite of these problems the area has immense potentiality for development on the basis of the local resources available here and the resources which may be developed through proper planning. The area is vulnerable to various natural hazards and the ecology is very sensitive so that, human interference may get magnified by natural response of the landscape system themselves.

- i) Olericulture and pomiculture are also practiced both in private and public arable lands especially beside the channel and valley-filled area for commercial purposes.
- ii) River Hugli and Rasulpur are the main sources of surface water and these are playing a vital role on ferry services throughout the year.
- iii) The mangrove plantation run by Govt. and Non-govt. organizations particularly at southern part of the area has been successful (Plate No. 7.2 and 7.3).
- iv) Fuel (wood) for salt production required gradual deforestation, which hastened erosion of soil, slowed navigability through incessant siltation and caused water-logging. Some time it helped land to become available for cultivation by siltation in low lying areas.

7.2 RECOMMENDATION

Keeping in mind the above findings, some suggestions are recommended for the development of this area along with an assessment of the resource potentialities for the economic revitalization of the area.

In 1514, before the Mughal Rule, the Portuguese first came here and established a business centre. Thereafter the Dutch, the English came here for business respectively at different times and remained here till the existence of the port Khejuri upto 1864. Undoubtedly, the existence of the foreign traders for such a long period of 350 years proves the resourcefulness of the area. For such an estuarine environmental setting, the study area has some resources and occupational advantages. Through proper management of the local resources and recovery of early occupations by proper planning and using technology, the economic development of the area may be ascertained.

1. The area is much suitable for growing vegetables, betel, betel nut, coconut, cashew nut, brackish water fish and salt etc. It is endowed with agricultural potentialities which should be cared with proper management policy as has also been suggested by Agricultural Development Office. Development of the industries relating to above agricultural products can be easily done. Modernization of the process of salt production, once the main economic source of this area, can now also be pursued as a means of livelihood.
2. Development of irrigation system to help double or multi-crop farming of this area is a must. There are 9 tanks, each covering an average area more than 4 acres (Plate No. 7.4). But now they have lost their depth due to lack of maintenance and have turned into swampy lands. These can be properly dredged so that they can store rain water to be used for irrigation in the dry periods. Making Hijili Tidal Canal navigable as before, to help inland trade and commerce. Although the first phase of dredging this canal at regular distance of 6 K.m at a proposed cost of Rs. 348.87 lakh by the govt. of West Bengal in March 2013 is going on (Plate no- 7.5).
3. Diversification of livelihood practices is urgently needed to increase production, involvement and man days. By providing certified seed, feed, medicine to prawn farmers the certainty of their earning can be ensured. There is an urgent need of promoting insurance sector run by the government. Cold storages are required to be installed for all sorts of production to make the producers (vegetable, fruits and fishes etc.) assured of good return.
4. Khejuri can be easily developed as a tourist spot. Keeping its heritage in mind, improvement of transport and communication is to be undertaken by the government. Old remnants related to the European traders should be preserved by the government properly, which will attract tourists and heritage-loving people. Religious tourists and heritage-loving people rush to Khejuri throughout year. But there are no hotels and lodge in permanent mode. So for developing it as a tourist place and religious centre, essential amenities are to be arranged that can develop the economic condition of this area.
5. Though this area is declared as one of the '*black zones*' (where extraction of ground water is restricted) by the District administrative authority (Plate No. 7.6), now 38 unauthorized deep tube-wells are engaged for irrigation. So a drastic step should be taken to save the local denizens in future. As reported by Block P.H.E. department, some big cracks on surface are found particularly at western part of

Khejuri during dry season due to huge extraction of ground water for boro cultivation.

6. Proper management of soil must be taken care off. Aqua cultures other than in the canals are to be strictly prohibited for the maintenance of inherent character of soil. In some cases, proper use of sluice gates may be practiced to restrict ingress of saline water. Thus, these canals may be helpful for irrigation in dry period and maintain pici cultural environment at the same time.
7. There is no jetty (quay) for the existing four regular ferry services (Plate No. 7.7 – 7.10). So, permanent jetty should be made for the convenient transport and communication (Map no- 7.2).
8. Arrangements for forecasting the cyclone, tsunamis, earthquakes and storm surges should be made for this area to minimize the damage of both resources and lives. Some rescue centers must be built in such hazardous zone to give quick shelter to the victims. Delineation of coastal buffer zone is to be completed and a quick communication system is also to be made to connect safe and buffer zone.
9. To check the die-back of the mangroves of this area, the first step should be taken by upholding the importance of the mangrove to the school going children and local people. Secondly its importance should be circulated in public meetings. Thirdly distribution of leaf-lets, audio visual display can also be taken up as mode of popularizing mangrove plantation among the local people.
10. There is an urgent need of Govt. intervention regulate land use and for registration of trawlers, farms etc. Through awareness camp, meeting, seminar about the changing life-style and its impact on bio-diversity and socio-economy of this area are acerbically organized. The unplanned agriculture, irrigation, and brick-field installation are responsible for extinction of the tributary canals. Thus the drainage is hindered severely and the area gets water logged in monsoon period.

7.3 CONCLUDING REMARKS

1. Khejuri is located at the interface of marine and fluvial environment. Naturally the soil of this area was not ideal for substantial crop production. Only Aman paddy was cultivated as single crop in most of the areas. For this reason the local people were bound to choose alternative livelihood based on coastal trade and commerce and industrial activities.
2. The British initiatives and activities turned Khejuri from coastal halt station to full-fledged port in 1679. Though, the Portuguese traders started commercial activities long before during 16th Century A.D. when navigation route had been maintained touching the area. From the beginning of the 19th century the rapid shifting of the main estuarine channel towards east caused deterioration of this port.

3. The river and the estuary also offer livelihood options to the local people. The coastal location provides a special importance to the area. Huge water resource can be utilized to meet increasing demand of people. But development activities without much attention on environmental issues have resulted in a great pressure on natural resources. So people awareness, participation and response are must in every step of management policies. The huge man power can also be used for proper utilization of resource both from land and water. The agriculture and its by-products can be practised in environmental friendly manner with proper management policy. The involvement of skilled labour in agro-industries can open a new prospect in this area.

Though Haldia, a supplementary port of Kolkata, has the importance of agro-industry along with other industries has become problematic due to lack of navigation. Despite having the opportunity of dredging with huge expense, the navigation towards the Haldia port is not reached upto a desirable level. So the only way is to regain the facilities of old historical port at Khejuri for the advantage of its open sea location. The pressure and problems of Haldia port can also be reduced thus by utilizing the advantages of the Khejuri port. By linking all types of transport and communication through Kolkata – Haldia – Khejuri – Contai – Digha - Odisha, the land of this single crop belt may be converted into an industrial zone which later will help to develop the port-based trade obviously.

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